

Sapphirinidae	-	-	-	-	-	†	-	†	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idoteidae	-	-	-	-	†	†	-	-	†	-	-	-	-	-	-	-	-	-	-	†	-	-
Other Amphipoda	-	†	†	-	†	-	†	†	†	-	-	-	†	†	†	-	†	-	†	†	-	-
Scyllaridae (phyllosoma)	-	-	-	-	-	-	-	†	-	-	-	†	-	-	-	-	-	-	-	-	-	-

Table S1. Planktonic taxa surveyed at the diving site.

Dates		08/4	09/4	10/4	11/4	12/4	13/4	16/4	17/4	18/4	19/4	20/4	21/4	22/4	23/4	24/4	25/4	26/4	27/4	28/4	29/4	30/4
Surface temperature		15	15	14,5	14,5	15	15	15	15,5	15,5	16	16,5	17	17	17,5	17,5	17,5	18	18,5	18,5	19	19
Wind direction		SE	SE	SE	SE	E	S	E	E	SE	NW	W	S	W	W	S	S	W	NW	S	NW	SW
Current direction		SE	E	SE	S	E	E	E	E	SE	E	E	E	N	N	E	NW	E	NE	E	S	NW
Moon Phase		50%	44%	34%	25%	17%	10%	5%	0%	1%	5%	11%	19%	29%	40%	51%	62%	73%	82%	90%	95%	99%
Taxon list																						
Cephalopoda	Argonautidae	-	-	-	-	†	†	-	-	†	-	†	†	-	-	-	-	-	-	-	-	-
	Sepiolidae	-	-	-	-	-	†	†	†	†	-	†	†	-	-	-	-	-	-	†	-	-
	Ommastrephidae	†	-	†	-	†	†	†	†	-	-	-	-	-	-	-	†	-	-	†	†	-
	Octopodiidae	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	†	-	-
Gastropoda	Pterotracheidae	-	†	-	-	-	-	-	†	-	†	-	-	-	-	-	-	-	-	†	-	-
	Cavoliniidae	-	†	-	-	†	†	†	-	†	-	†	-	-	-	-	-	-	-	†	-	-
	Atlantidae	-	-	-	-	-	-	-	-	†	-	-	†	-	-	-	-	-	-	-	-	-
	Phylliroidae	-	-	-	-	-	-	-	-	-	-	-	-	†	-	-	-	-	-	-	-	-
Thaliacea	Salpidae	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†
	Appendiculariinae	-	†	-	-	†	†	†	†	-	†	-	-	-	-	-	†	-	-	-	†	†
	Pyrosomatidae	-	-	-	-	-	-	-	-	-	-	-	†	†	-	†	-	-	-	†	†	-
Teleostea	Trachipteridae	-	-	-	-	-	-	†	†	†	-	-	-	-	-	-	-	-	†	†	-	

Anguilliformes larva.	-	-	-	-	-	†	†	-	-	†	-	†	-	-	-	-	-	-	-	-	-
Pleuronectiformes larva.	-	-	-	-	-	-	-	-	-	†	-	-	-	-	-	-	-	-	-	-	-
Phycidae juv. (<i>Phycis cf. phycis</i>)	-	-	-	-	-	-	†	-	-	†	-	-	-	-	-	-	-	-	-	-	-
Ipnopidae juv. (<i>Bathypterois</i> sp.)	-	-	-	-	-	-	†	-	-	†	-	-	-	-	-	-	-	-	-	-	-

Table S1. Planktonic taxa surveyed at the diving site.

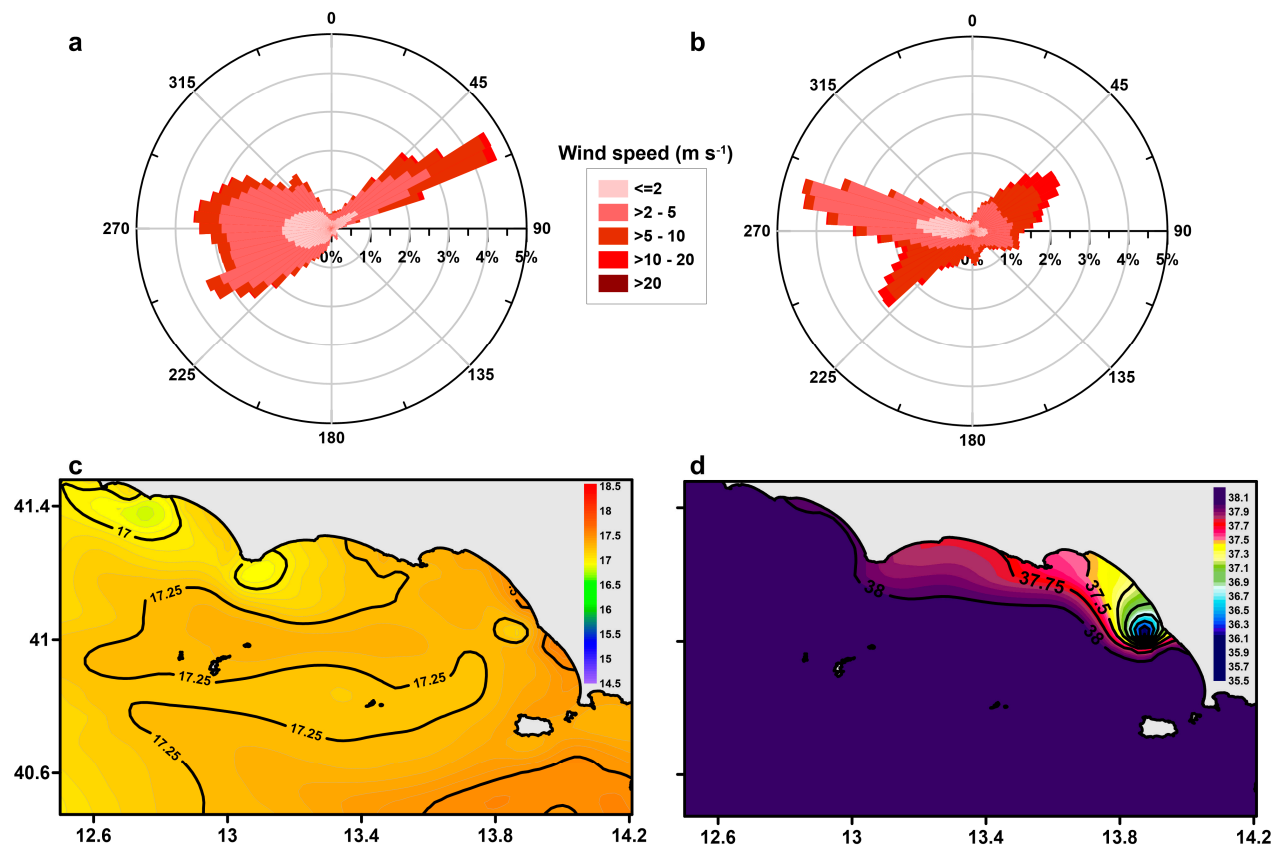


Figure S1. (a) and (b) show respectively the wind rose of Ponza (2011–2015) and Gaeta (2007–present). Map (c) and (d) show respectively the mean distribution of SST and Salinity from 1987 to present.

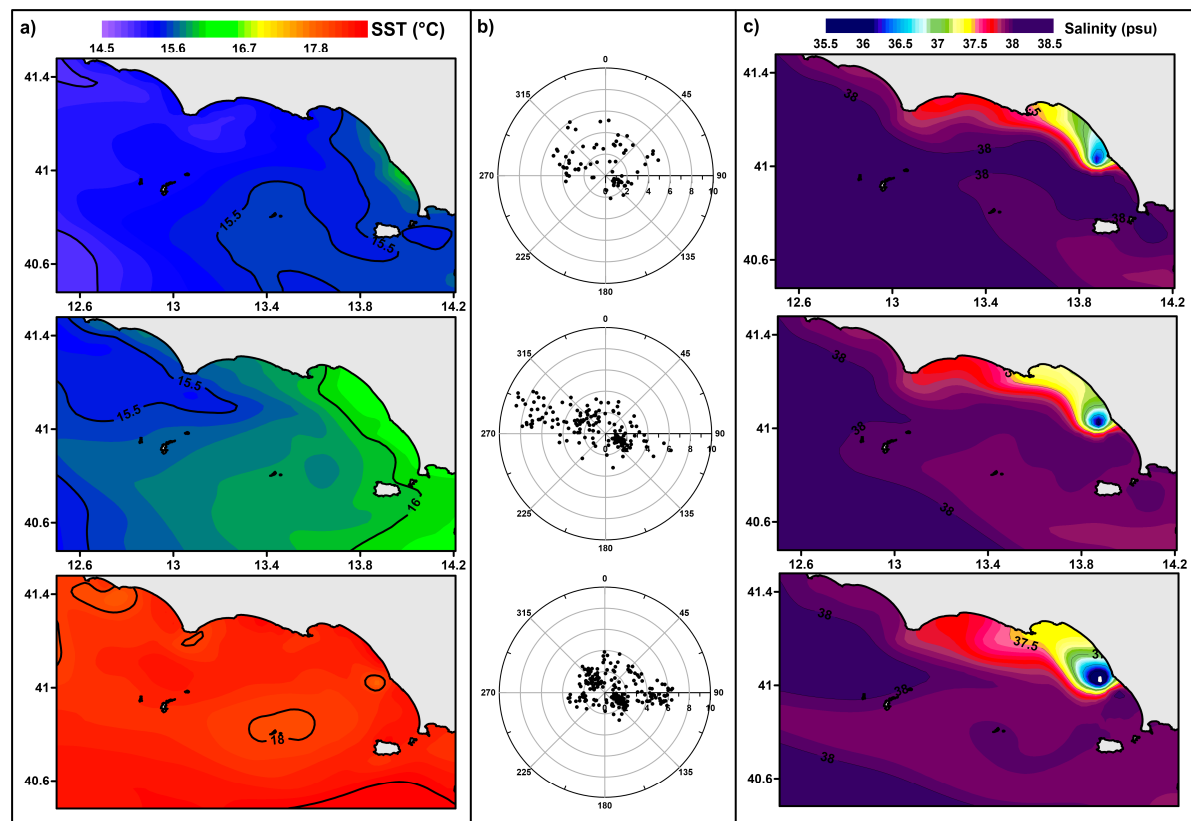


Figure S2. In the panel (a) is presented in descending order the distribution of SST during 9th–11th of April, during 12th–18th of April and during 19th–28th of April. In the panel (b) the polar scatter of wind indicates the direction (polar orientation) and intensity of wind (x-axis). In the panel (c) is presented in descending order the distribution of Salinity during 9th–11th of April, during 12th–18th of April and during 19th–28th of April

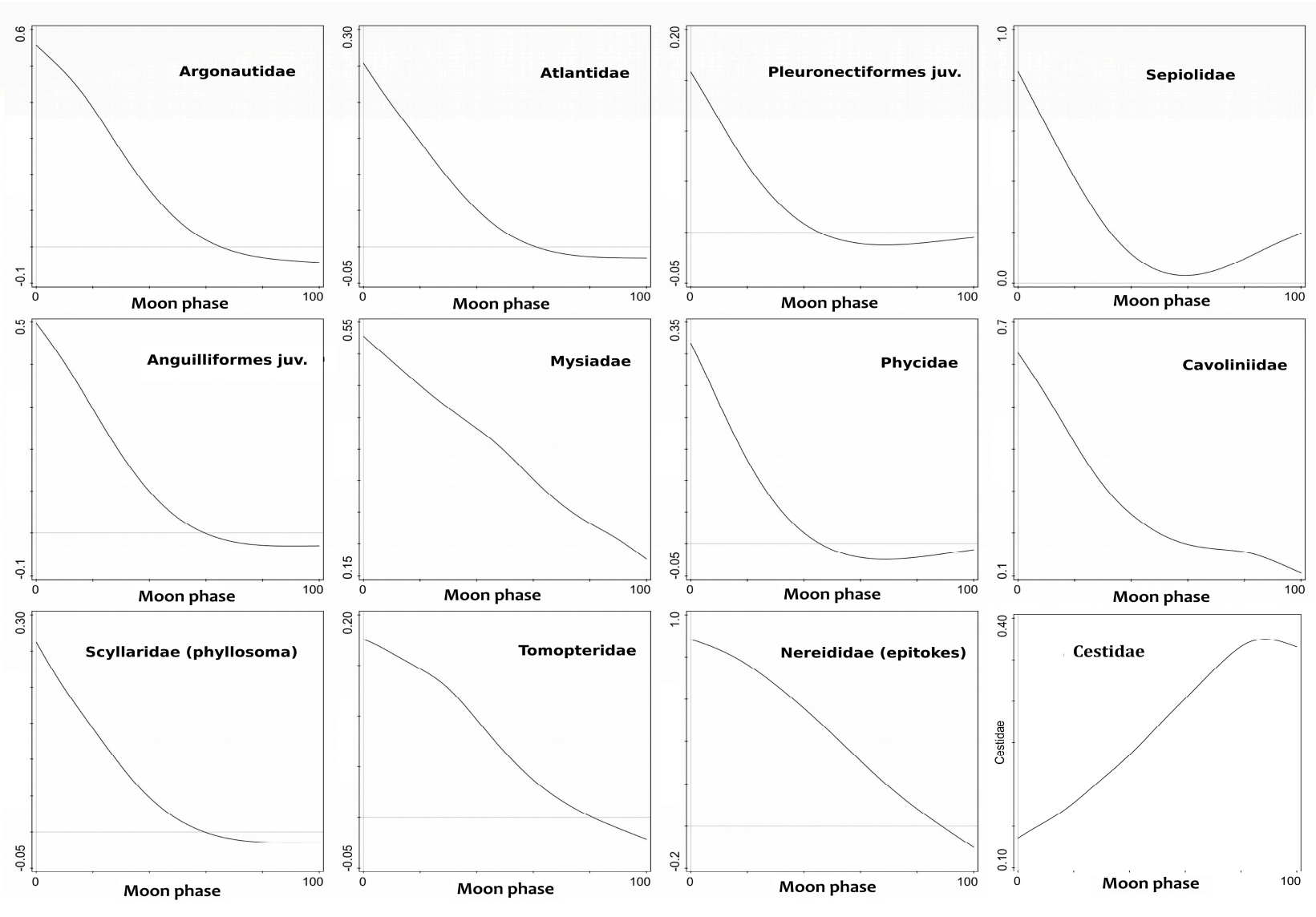


Figure S3. Taxa occurrence according to moon phase.

Morphological and morphometric analysis.

The standard length (SL) of the 4 specimens analyzed ranged from 41 mm to 156 mm. The main morphometric measurements in relation to the total length (TL) of each specimen are reported in Table 1. The maximum body depth (19% about of the TL) was reached immediately behind the head. The eyes were located at about middle half of the height of the head. The head profile was very steep. The prolonged dorsal fin rays were broken close to their base, presenting orange spots equally distributed over the whole ray length. The body of the juveniles analyzed was shorter and higher than those generally reported for adults; furthermore, unlike adults, where all fins are reddish, the dorsal fin and the pectoral fins of juveniles were translucent. In the similar species, *T. arcticus* the maximum body depth is reached at a quarter or a third of its standard length and the body is overall more uniform in depth; while, in our specimens the maximum body depth was reached immediately behind the head. Furthermore, unlike adults, in which the eyes are located in the upper part of the head, in juveniles the eyes are located at about middle half of the height of the head. In juveniles, the head profile was steeper than adults (Borme & Voltolina, 2006).

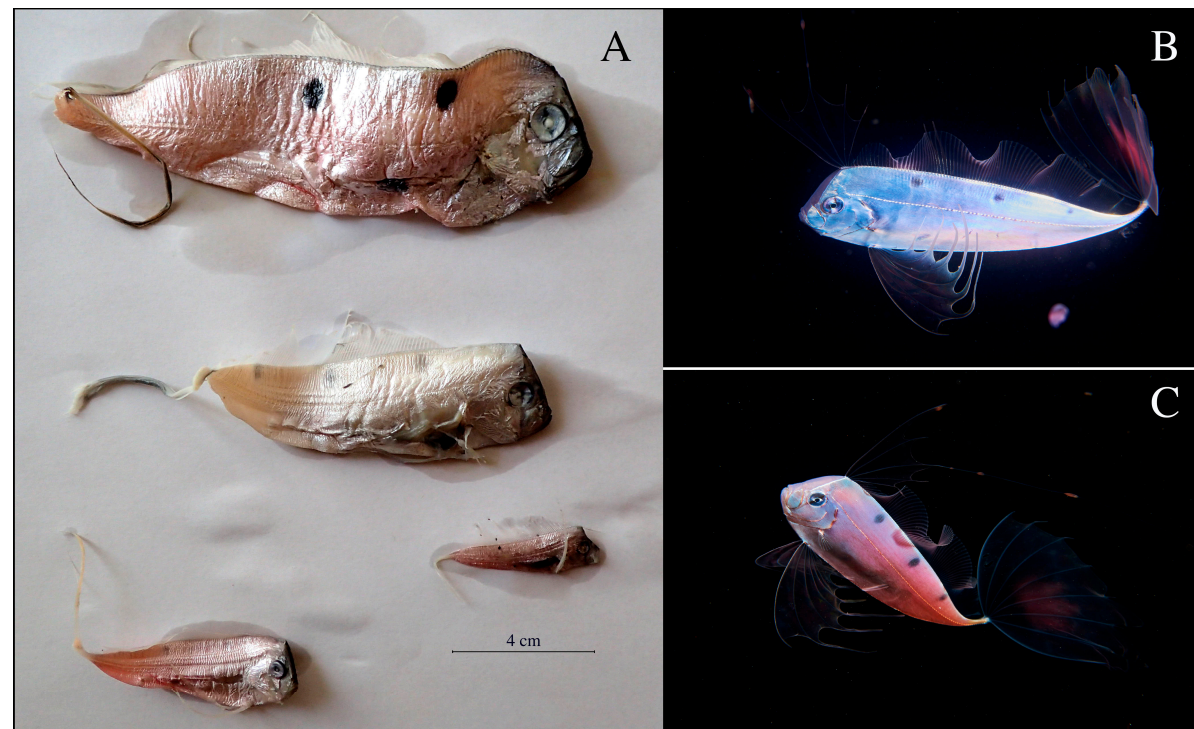


Figure S4. The four sampled juvenile specimens of *Trachipterus trachipterus* from the central Tyrrhenian Sea (A-C), measurements are reported in Tab. 2.

	<i>Specimen 1</i>		<i>Specimen 2</i>		<i>Specimen 3</i>		<i>Specimen 4</i>	
	<i>mm</i>	<i>%TL</i>	<i>mm</i>	<i>%TL</i>	<i>mm</i>	<i>%TL</i>	<i>mm</i>	<i>%TL</i>
<i>Total length (TL)</i>	229	100	157	100	91	100	58	100
<i>Standard length (SL)</i>	156	68.12	104	66.24	59	64.84	41	70.69
<i>Head length</i>	28	12.23	21	13.38	14	15.38	9	15.52
<i>Eye diameter</i>	9	3.93	6	3.82	4	4.40	3	5.17
<i>Max body depth</i>	40	17.47	28	17.83	19	20.88	11	18.97

Table S2. Morphometric measurements of the four juvenile specimens of *T. trachipterus* reported in Figure S4 and collected in the central Tyrrhenian Sea.

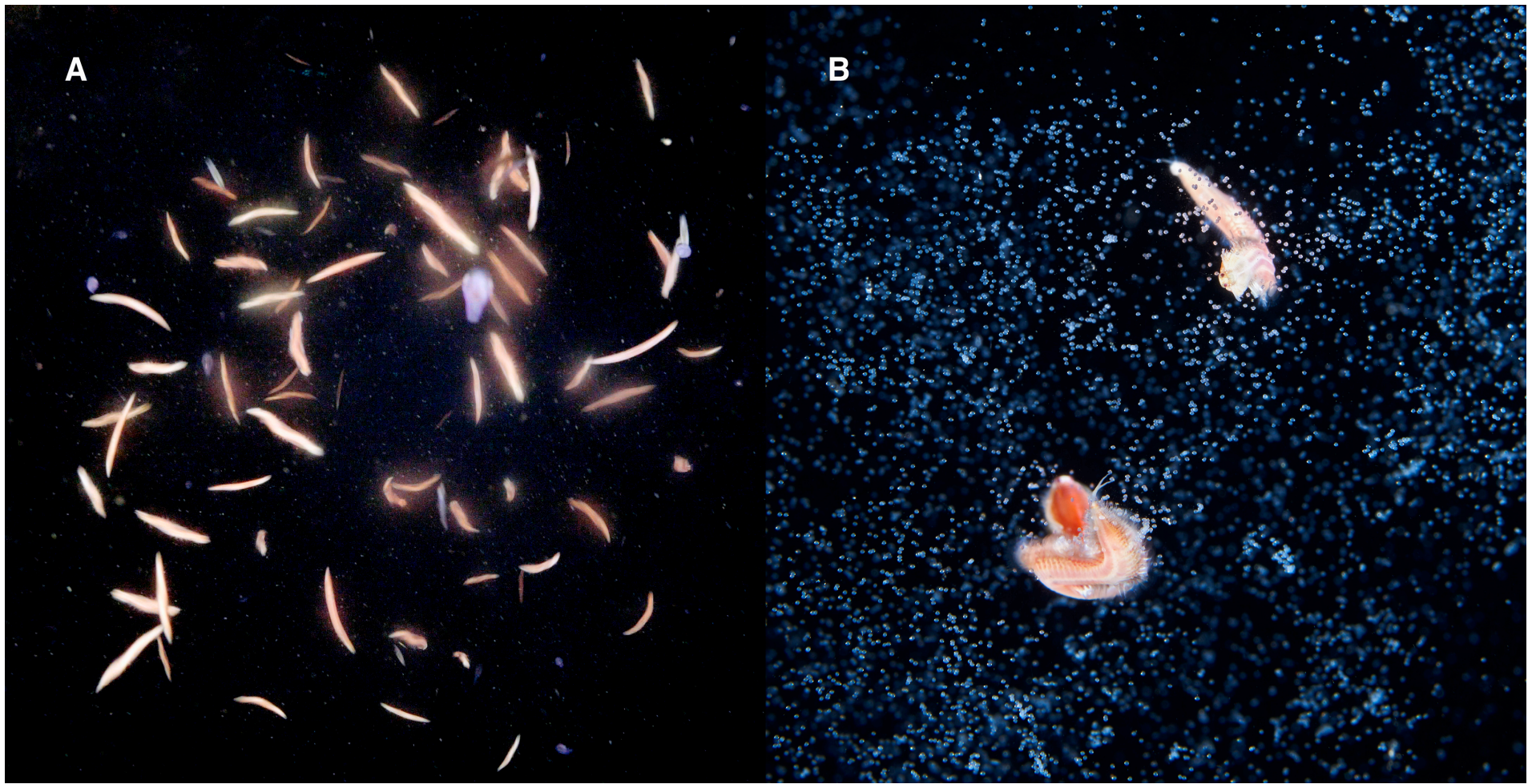


Plate I. Mating behaviour observed during the surveyed period (A) nereids epitokes mating close to the surface; (B) details of epitokes releasing eggs

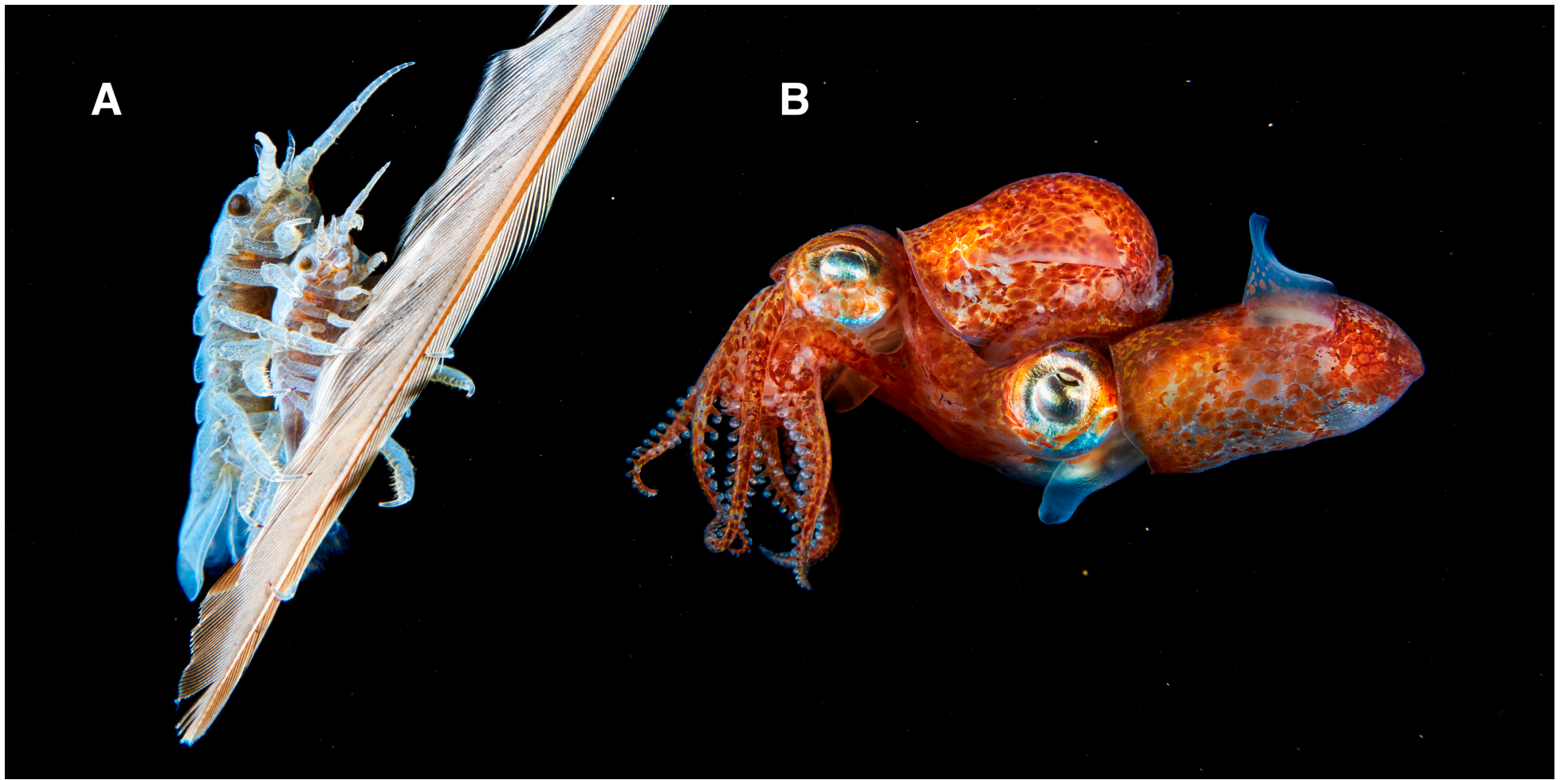


Plate II. *Mating behaviour observed during the surveyed period: (A) Idioteidae on a feather; (B) Sepiolidae*

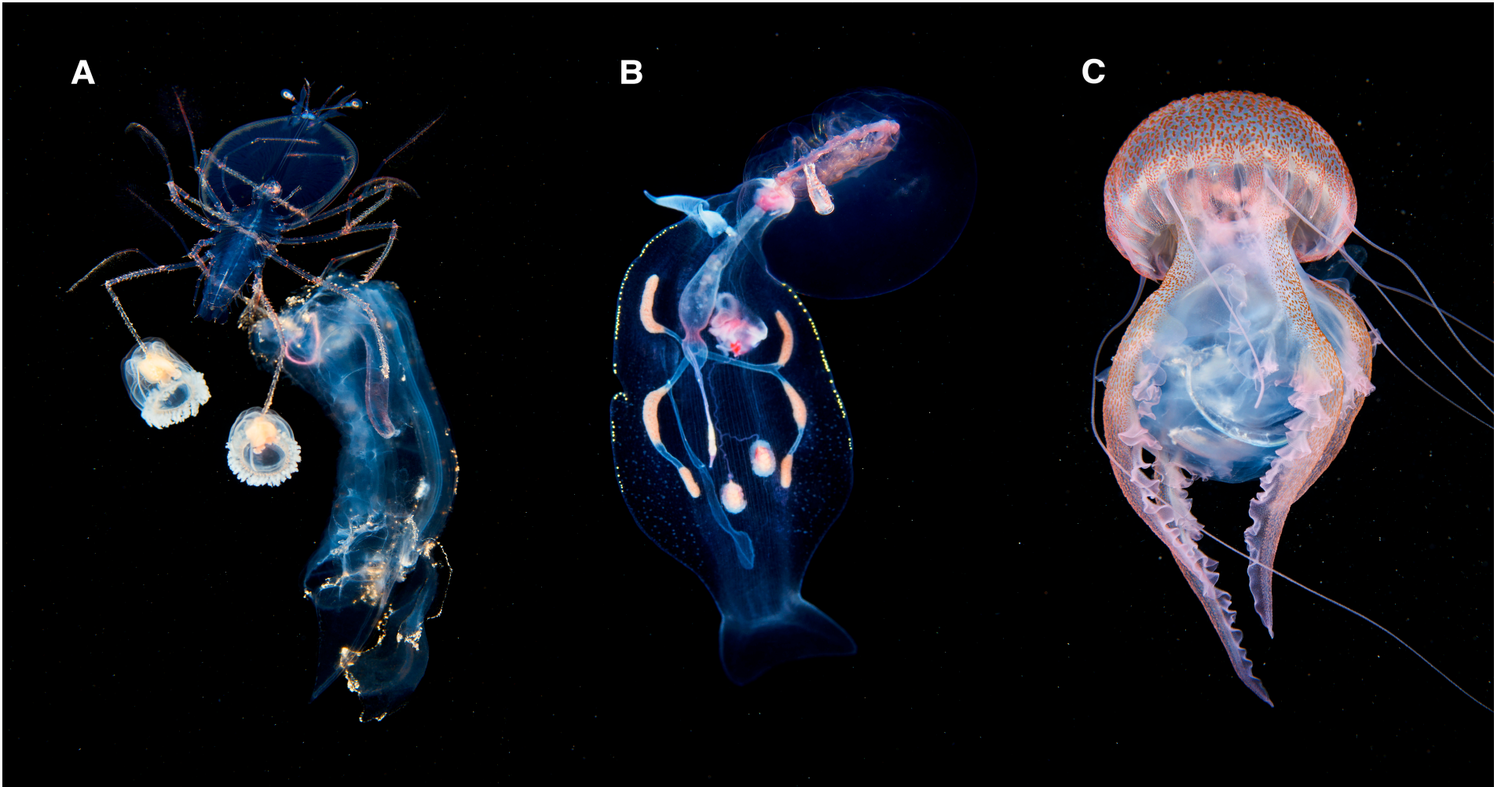


Plate III. Trophic interaction within plankton community, observed during the surveyed period: (A) Scyllaridae phyllosoma feeding on a salp, with detail of its peculiar interaction with jellyfish species as a floating support; (B) *Phylliroe* cfr. *lichtensteini* feeding on a jellyfish; (C) *Pelagia noctiluca* feeding on a salp.

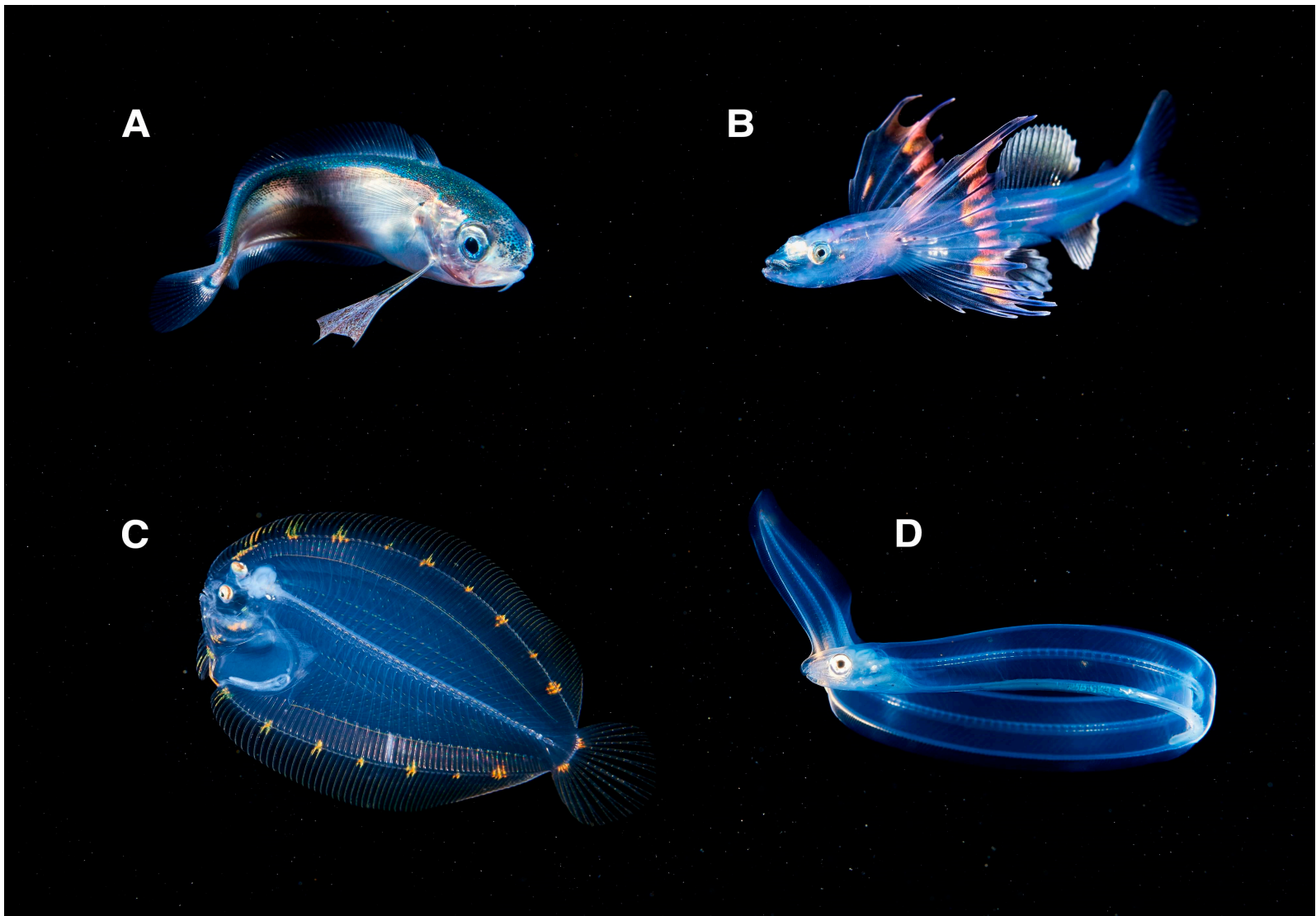


Plate IV. Fish juvenile/larval stages recorded during the expedition: (A) Phycidae (*Phycis* cf. *phycis*); (B) Ipnopidae (*Bathypterois* sp.) (C) Pleuronectiformes; (D) Anguilliformes